Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Previously Presented) A catheter system for positioning a stent at a vessel bifurcation, the catheter system comprising:

a catheter, the catheter comprising:

a channel having a main guidewire lumen extending proximally from a distal end of said catheter to a main exit port, said main exit port located at a first distance from said distal end, wherein said main guidewire lumen is configured to receive a main vessel guidewire therethrough; and

a branch guidewire enclosure positioned alongside said channel, wherein said branch guidewire enclosure is configured to receive a branch vessel guidewire therethrough; and

a stent having a lumen and a side opening in a wall thereof, said stent positioned on a distal portion of said channel, and wherein a distal portion of said branch guidewire enclosure is positioned through said lumen and exiting at said side opening, said branch guidewire enclosure extending proximally from said side opening of said stent to a branch exit port, said branch exit port located at a second distance from said distal end of said catheter system, said branch guidewire enclosure bonded to said channel only at said branch exit port, said first distance and said second distance being substantially equal,

wherein said first distance and said second distance are less than a distance from said distal end of said catheter system to a proximal end of said catheter system and greater than a distance from said distal end of said catheter system to said proximal end of said stent.

2. (Original) The catheter system of claim 1, further comprising a balloon disposed on said channel and through said lumen of said stent, said balloon being for expansion of said stent.

3. (Original) The catheter system of claim 2, wherein said channel further comprises an inflation portion for inflating said balloon.

4. (Original) The catheter system of claim 1, further comprising a bond portion connecting said main exit port and said branch exit port to a proximal tube, said proximal tube extending proximally from said bond portion to the proximal end of said catheter system.

5. (Original) The catheter system of claim 1, wherein said first distance is between 10 and 50 centimeters.

6-7. (Canceled)

8. (Previously Presented) The catheter system of claim 1, wherein said second distance is between 50 and 150 centimeters.

9-12. (Canceled)

13. (Currently Amended) A catheter comprising:

a proximal tube terminated at a distal ~~open~~ end;

a distal assembly comprising a first tube terminated at a proximal ~~open~~ end and a second tube terminated at a proximal ~~open~~ end, wherein said first tube is configured to receive a first guidewire and said second tube is configured to receive a second guidewire; and

a three-way bond coupling the distal ~~open~~ end of the proximal tube to said proximal ~~open~~ end of said first tube and to said proximal ~~open~~ end of said second tube; wherein the second tube of the distal assembly is bonded to the first distal tube only at the three-way bond.

14 (Previously Presented) The catheter of claim 13, further comprising a balloon disposed on said distal assembly, wherein said distal assembly comprises an inflation lumen, said inflation lumen being in communication with said balloon for inflation thereof.

15. (Original) The catheter of claim 14, further comprising a stent positioned on said balloon, and wherein said second guidewire is configured to exit through a side opening in said stent.

16-18. (Canceled)

19. (Previoustly Presented) The catheter of claim 15, wherein said three-way bond is located a predetermined distance proximally from a proximal portion of said stent.

20. (Original) The catheter of claim 19, wherein said predetermined distance is 5-15 centimeters.

21. (Previously Presented) The catheter of claim 13, wherein said proximal tube portion connects to said three-way bond at a location spaced from where said distal portion connects to said three-way bond.

22. (Previously Presented) The catheter of claim 13, wherein said first and second guidewires are configured to exit said catheter at said three-way bond.

23. (Previously Presented) The catheter of claim 13, wherein said first guidewire and said second guidewire are less than 50 centimeters in length.

24-27. (Canceled)

28. (Previously Presendted) A catheter comprising:
a proximal tube extending from a proximal end to a distal end;

a first distal tube having a proximal open end, the first distal tube being configured to receive a first guidewire;

a second distal tube having a proximal open end, the second distal tube being configured to receive a second guidewire; and

a bond having a proximal end and a distal end, the proximal end of the bond connecting to the proximal tube at the distal end of the proximal tube, the distal end of the bond connecting to the first distal tube at the proximal open end of the first distal tube, and the distal end of the bond connecting to the second distal tube at the proximal open end of the second distal tube, wherein the second distal tube is detached from the first distal tube outside of the bond.

29. (Previously Presented) The catheter of claim 28, wherein the first and second guidewires are configured to exit the catheter at the proximal open ends of the first and second distal tubes.

30. (Previously Presented) The catheter of claim 28, wherein the first guidewire and the second guidewire are each less than 50 centimeters in length.

31. (Previously Presented) The catheter of claim 28, further comprising:

a balloon disposed on the first distal tube, which defines an inflation lumen that is in communication with the balloon for inflation thereof; and

a stent positioned on the balloon, wherein the second guidewire is configured to exit through a side opening in the stent.